

Work Order ID 71864

Wednesday, July 13, 2011 11:01:51 AM

Page 1

Item ID: D3183-045

Accept

Revision ID:

Item Name: Bearing Assembly

Start Date: 7/14/2011 Start Qty: 20.00

Required Date: 7/28/2011 Req'd Qty: 20.00

Reference:

Approvals: Process Plan: MKF Date: 11-07-13 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3183	Rev C1

100	Hardinge CNC LATHE SMALL	0.00				20	φ		
Hardinge	Memo	0.00							
Hardinge CNC Lathe Small	Turn D3183-9 Cap as per Folio FA388 □ Debur								

11/18/10

110	QC2- Inspect parts off machine FAI/FAIB	0.00				20	φ		
QC	Memo	0.00							
Quality Control									

11/18/10

120	QC8- Inspect parts - second check	0.00				20	4		
QC	Memo	0.00							
Quality Control									

11-8-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries

Work Order ID 71864

Wednesday, July 13, 2011 11:01:51 AM



Page 2

Item ID: D3183-045

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearing Assembly

Start Date: 7/14/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

Press D3183-5 Bearing into D3183-9 Cap as per Dwg D3183.

Handwritten signature and date: 7/11/08/11 (2019)

140

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

Handwritten signature: Dulash

Handwritten marks: (X19), (XU), PD →

150

0.00



Identify as per dwg & Stock Location: *230*

Packaging

Memo

0.00

Packaging

Handwritten date and signature: 11/8/11 sl (180)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-2 PAR #: N/A Fault Category: Machining NCR: Yes No DQA: A Date: 11-08-17
 Resolution: SCAP Disposition: SCAP QA: N/C Closed Date: 11.8.17

NCR: <u>71864</u>		WORK ORDER NON-CONFORMANCE (NCR) <u>2.88</u>						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>11/08/17</u>	<u>#100</u>	<u>Found at assembly that qty #1 D3183-2 was machined too thin cap doesn't fit bearing</u>	<u>[Signature]</u>	<u>-SCAP + Destroy no Repair</u>	<u>[Signature]</u> <u>11/08/17</u>	<u>[Signature]</u> <u>11/08/17</u>	<u>[Signature]</u> <u>11/08/17</u>	<u>[Signature]</u> <u>11/08/17</u>
		<u>R.C. Lack of Attention on operator.</u> <u>(tools set correct, program correct, w/o + Drawings are correct + FAI sheet is Right)</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>
		<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>

NOTE: Date & initial all entries

Work Order ID 71864

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Page 3

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

CK 11/08/12

H11-08-12
(18)

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, July 13, 2011 11:01:49 AM

Page 1

Work Order ID: 71864

Parent Item: D3183-045

Parent Item Name: Bearing Assembly



Start Date: 7/14/2011

Required Date: 7/28/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A 04.02.18 New issue KJ/DS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3183-5 Bearing		Manufactured	No			110	Each	5.0000	1	20			
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				ST236	5								
				67529	1								
				68933	4								
MDELNR1.000 Delrin Round Bar 1"		Purchased	No			130	f	32.4070	0.0333	0.701053			
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				MAT055	32.407								
				117985	0.407								
				118257	32								

4511/08/11
B72295 (20)
SD 118110
7/14

W/O:		WORK ORDER CHANGES					
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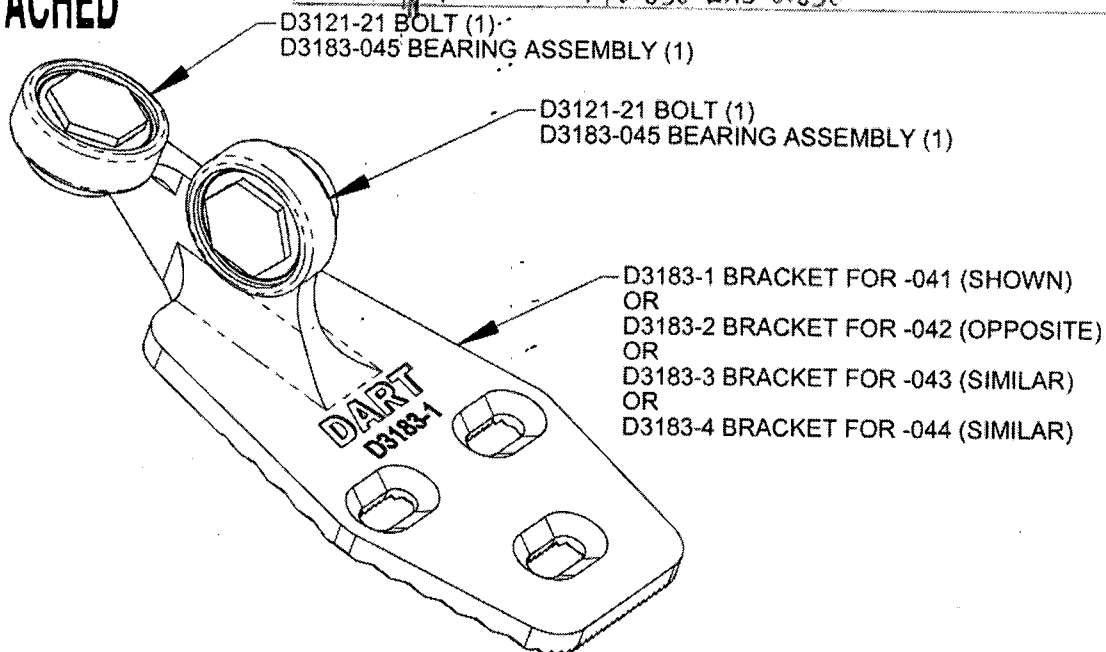
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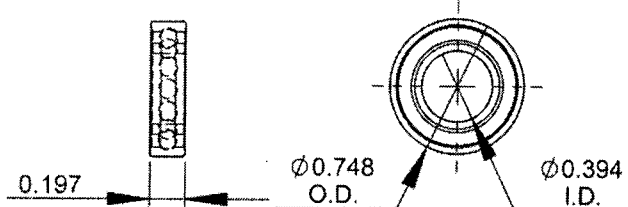


DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	# 04.11.09	0.830 WAS 0.850	

RELEASED
04.03.01
DEO ATTACHED

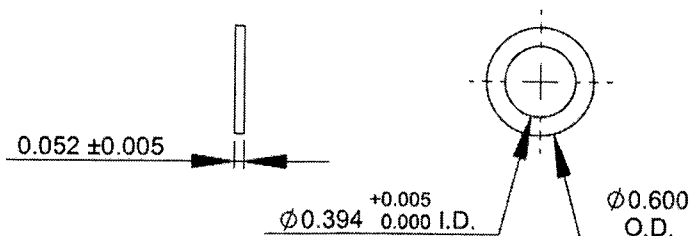


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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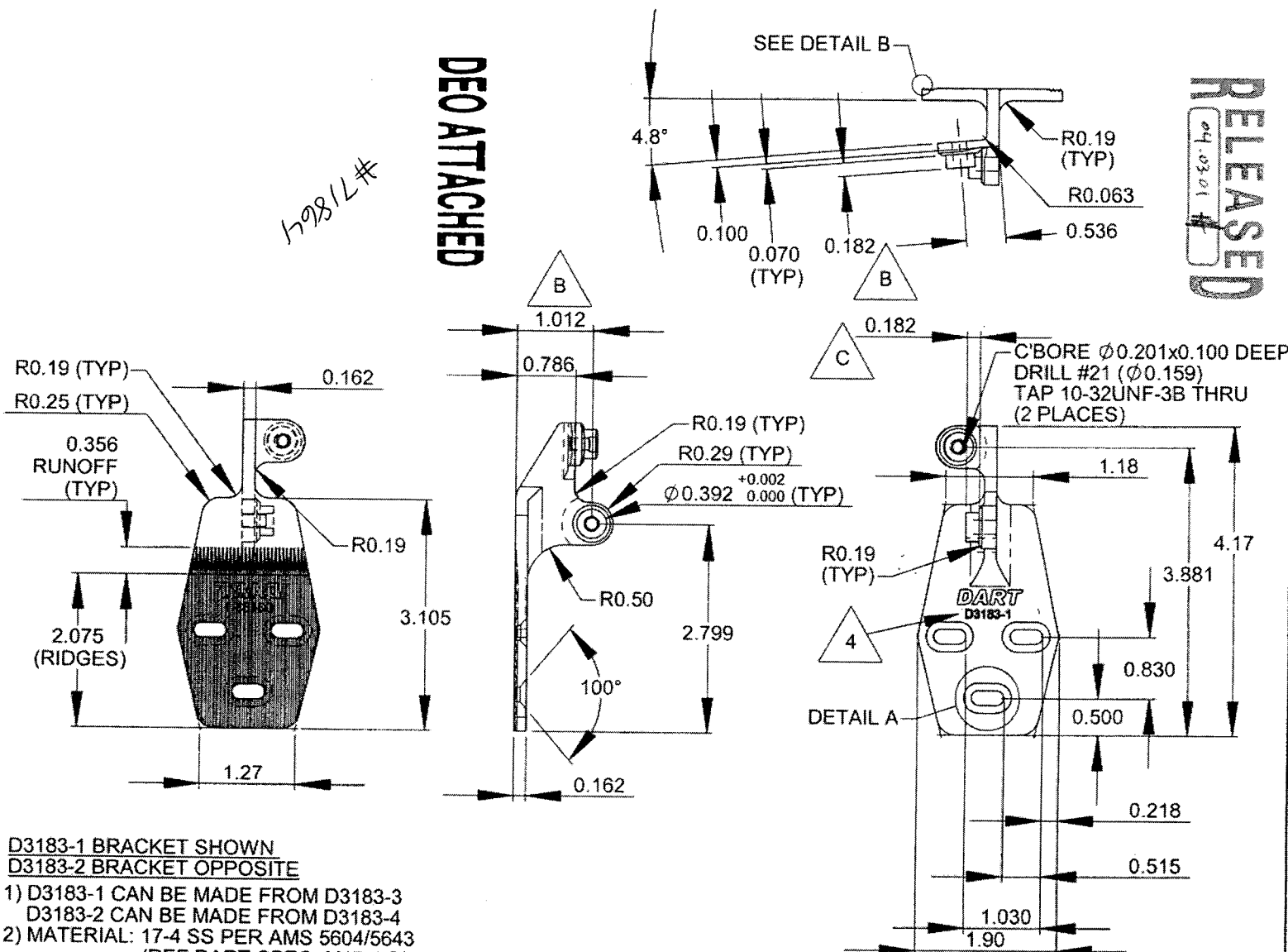


DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 2 OF 4
TITLE	SCALE	
BRACKET ASSEMBLY	1:2	

RELEASED
04.03.01

DEO ATTACHED

170817#



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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

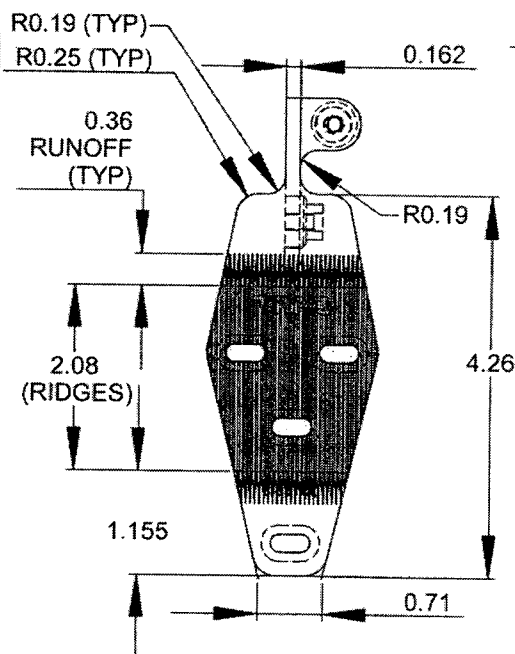
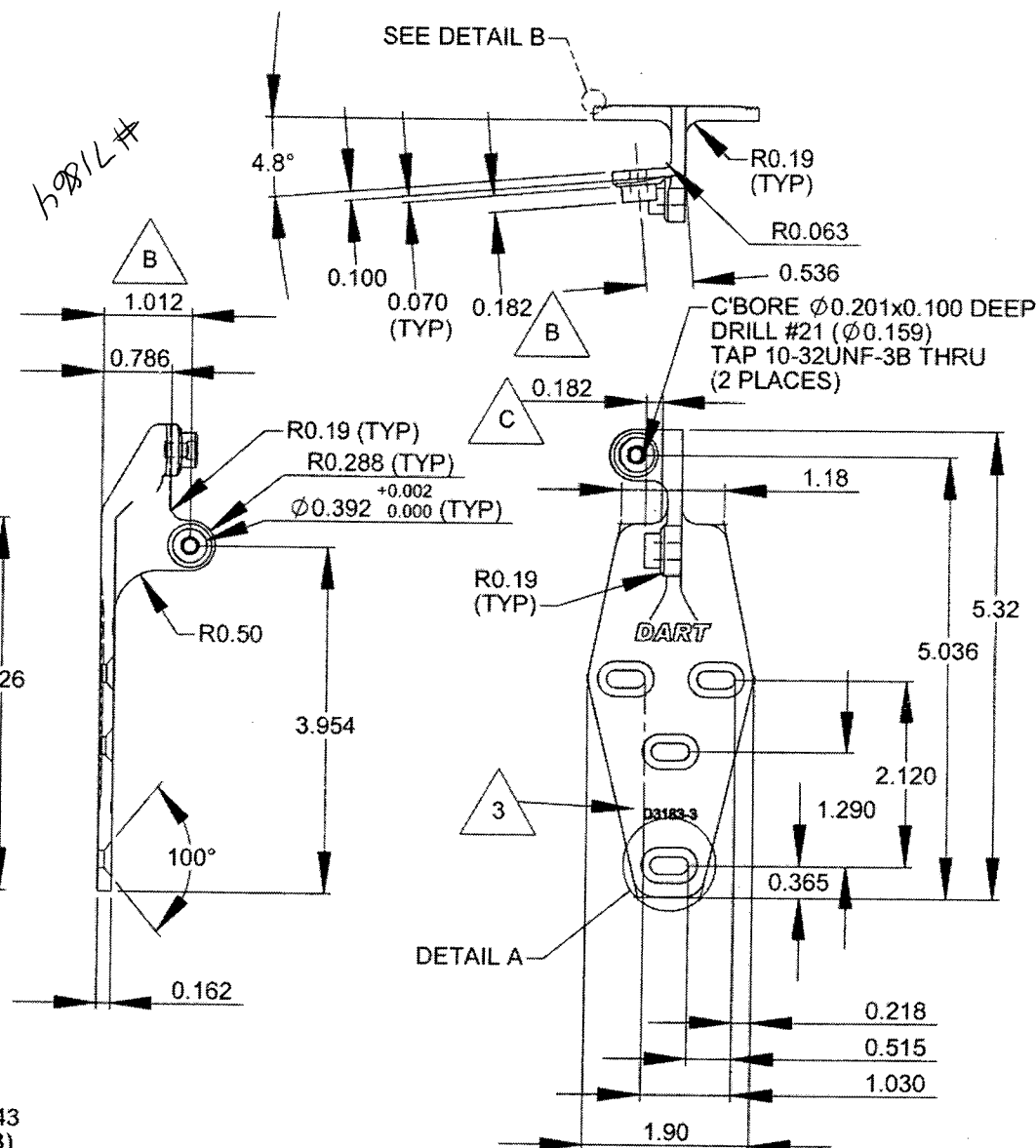
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

ISSUED COPY

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. C
04.02.17	D3183	SHEET 3 OF 4
	BRACKET ASSEMBLY	SCALE 1/2



D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DEO ATTACHED
RELEASED

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

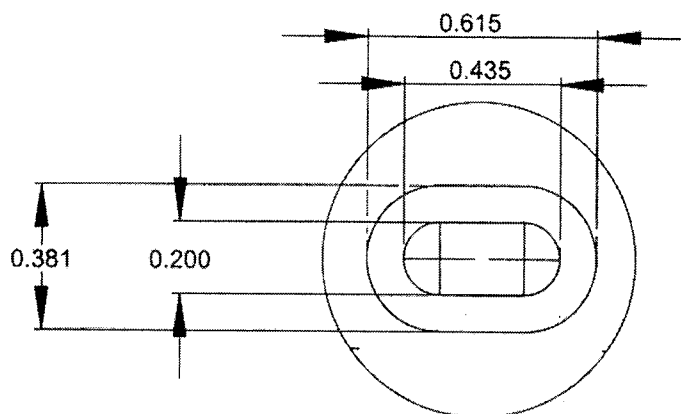
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3183	REV. C SHEET 4 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

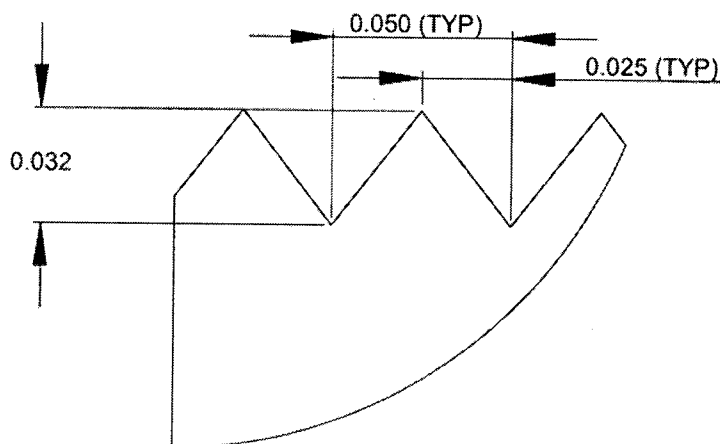


DETAIL A (2 : 1)

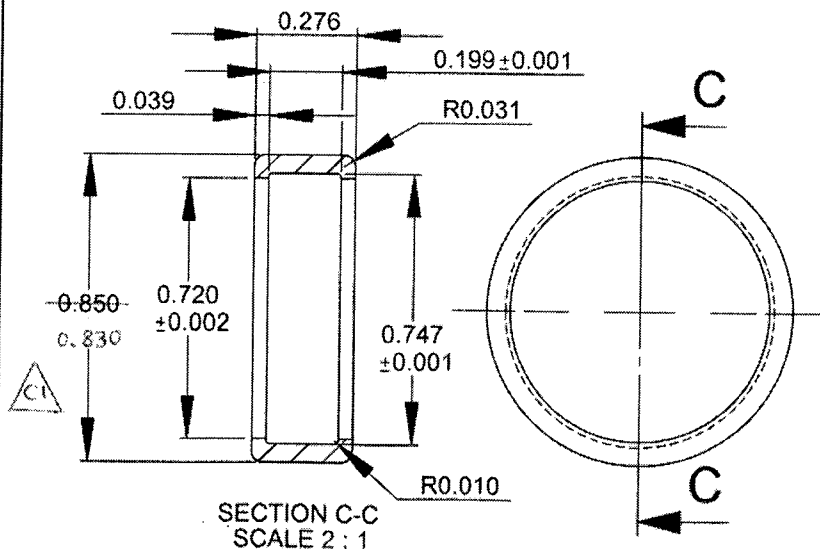
RELEASED
04.03.01

DEO ATTACHED

DETAIL B (20 : 1)



#7184



D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

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DRAWING NO. D3183	TITLE BRACKET ASSEMBLY	REV.C1	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3183-C1-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>Q</i>	CHECKED <i>L</i>	MFG. APPR. <i>MA</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 10.05.14	DATE 10.06.30	DATE 10.06.30	DATE 10/06/30		DATE 10/06/30		

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT: Cr = 1720 N (386 lb) MIN [DYNAMIC]
Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

h281L#

RELEASED
2010-07-22
WD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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